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## DASY/EASY – Parameters of Probe: EX3DV4 – SN:7524

### Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz] <sup>C</sup>	Relative Permittivity <sup>F</sup>	Conductivity (S/m) <sup>F</sup>	ConvF X	ConvF Y	ConvF Z	Alpha <sup>G</sup>	Depth <sup>G</sup> (mm)	Unct. (k=2)
750	41.9	0.89	10.41	10.41	10.41	0.16	1.23	± 12.1%
835	41.5	0.90	10.05	10.05	10.05	0.17	1.20	± 12.1%
1750	40.1	1.37	8.43	8.43	8.43	0.21	1.04	± 12.1%
1900	40.0	1.40	8.05	8.05	8.05	0.23	1.02	± 12.1%
2000	40.0	1.40	8.14	8.14	8.14	0.17	1.21	± 12.1%
2300	39.5	1.67	7.92	7.92	7.92	0.50	0.69	± 12.1%
2450	39.2	1.80	7.65	7.65	7.65	0.48	0.72	± 12.1%
2600	39.0	1.96	7.45	7.45	7.45	0.58	0.67	± 12.1%
3300	38.2	2.71	7.13	7.13	7.13	0.33	0.97	± 13.3%
3500	37.9	2.91	7.04	7.04	7.04	0.46	0.88	± 13.3%
3700	37.7	3.12	6.86	6.86	6.86	0.38	1.02	± 13.3%
3900	37.5	3.32	6.71	6.71	6.71	0.30	1.50	± 13.3%
4100	37.2	3.53	6.61	6.61	6.61	0.30	1.38	± 13.3%
5250	35.9	4.71	5.38	5.38	5.38	0.45	1.45	± 13.3%
5600	35.5	5.07	4.74	4.74	4.74	0.45	1.52	± 13.3%
5750	35.4	5.22	4.87	4.87	4.87	0.45	1.58	± 13.3%

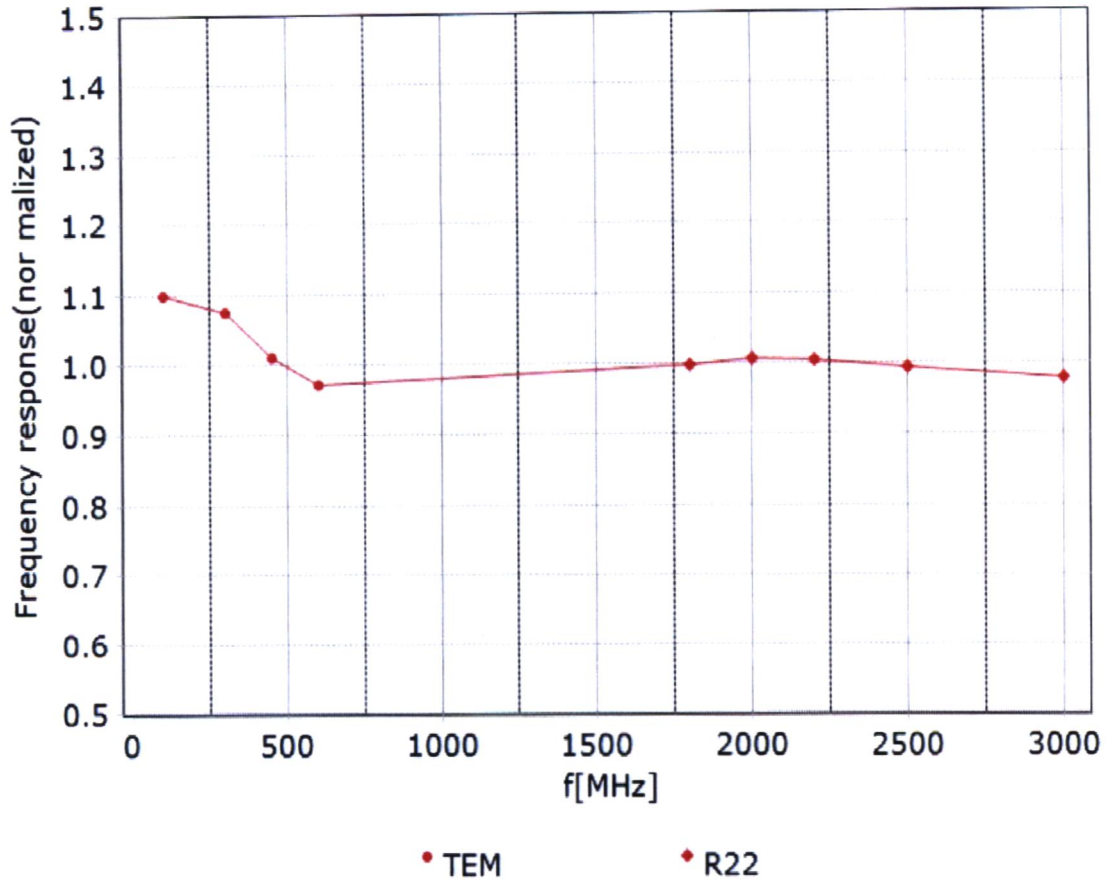
<sup>C</sup> Frequency validity above 300 MHz of ±100MHz only applies for DASY v4.4 and higher (Page 2), else it is restricted to ±50MHz. The uncertainty is the RSS of ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

<sup>F</sup> At frequency below 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) can be relaxed to ±10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) is restricted to ±5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

<sup>G</sup> Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for the frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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## Frequency Response of E-Field (TEM-Cell: ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field:  $\pm 7.4\%$  ( $k=2$ )

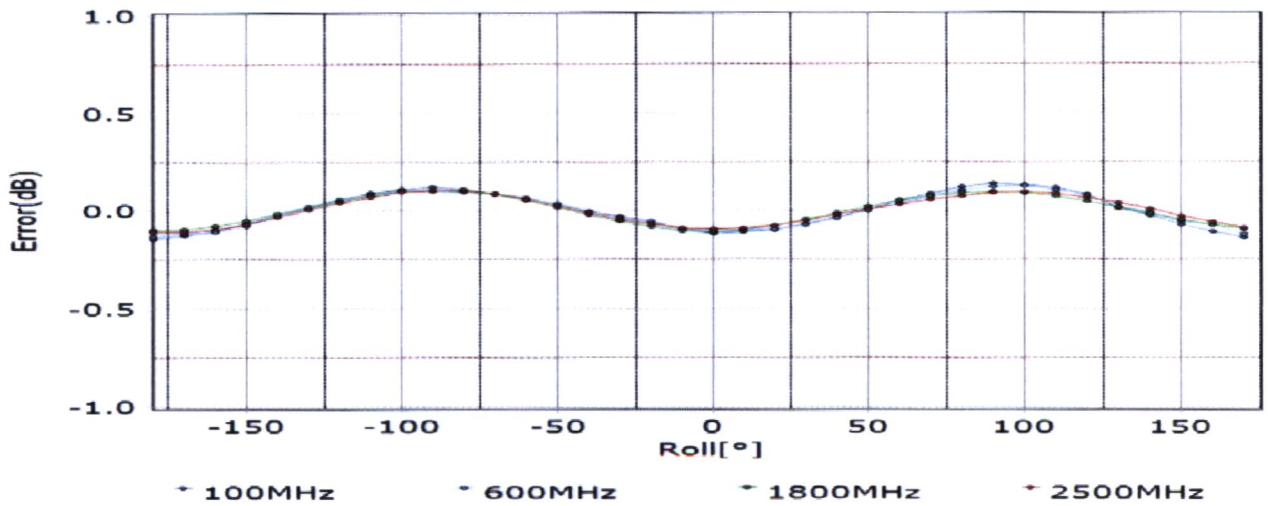
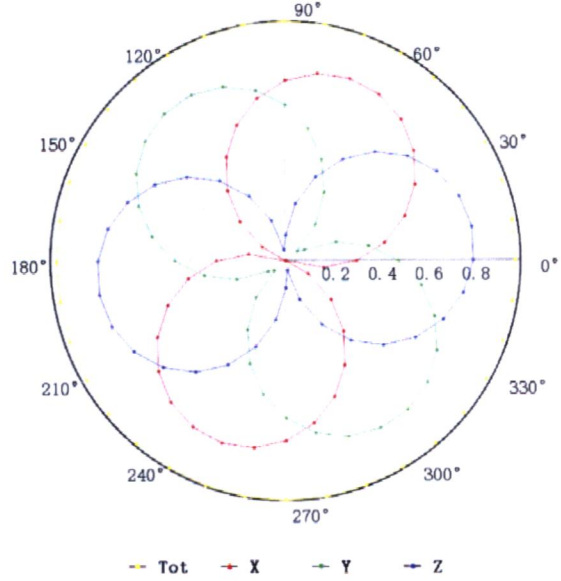
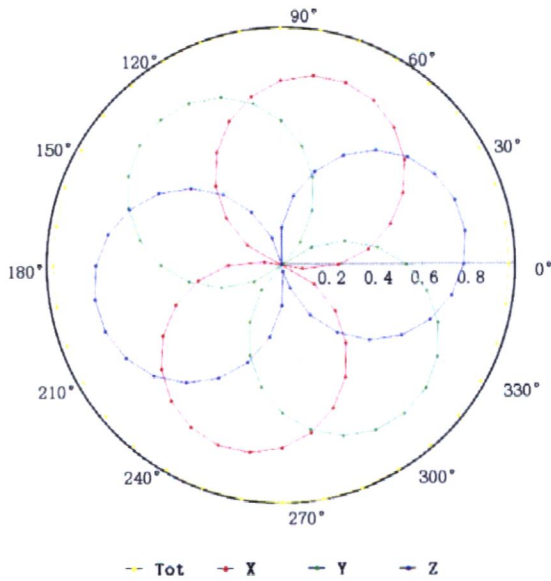


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## Receiving Pattern ( $\Phi$ ), $\theta=0^\circ$

**f=600 MHz, TEM**

**f=1800 MHz, R22**

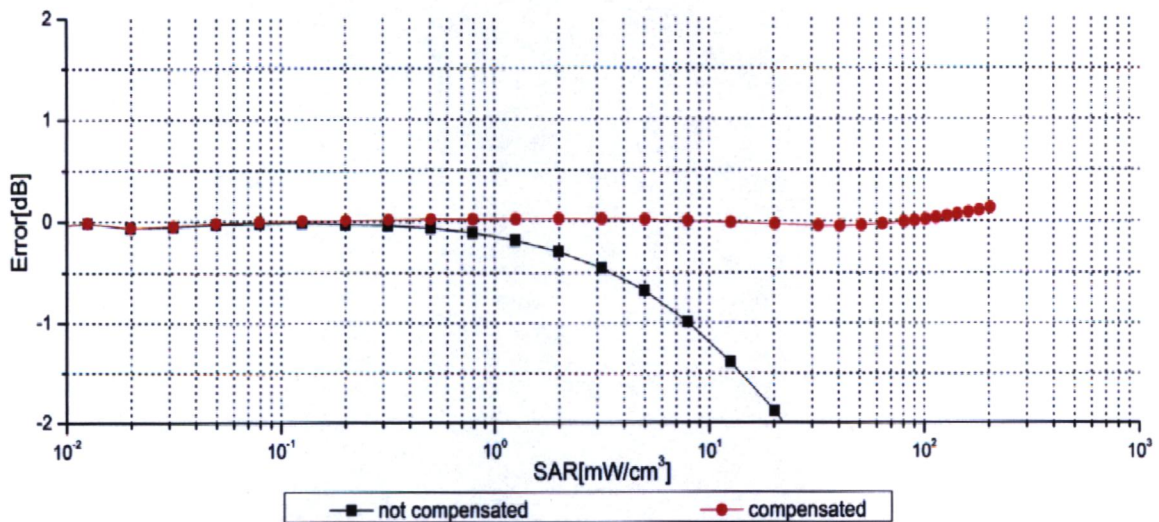
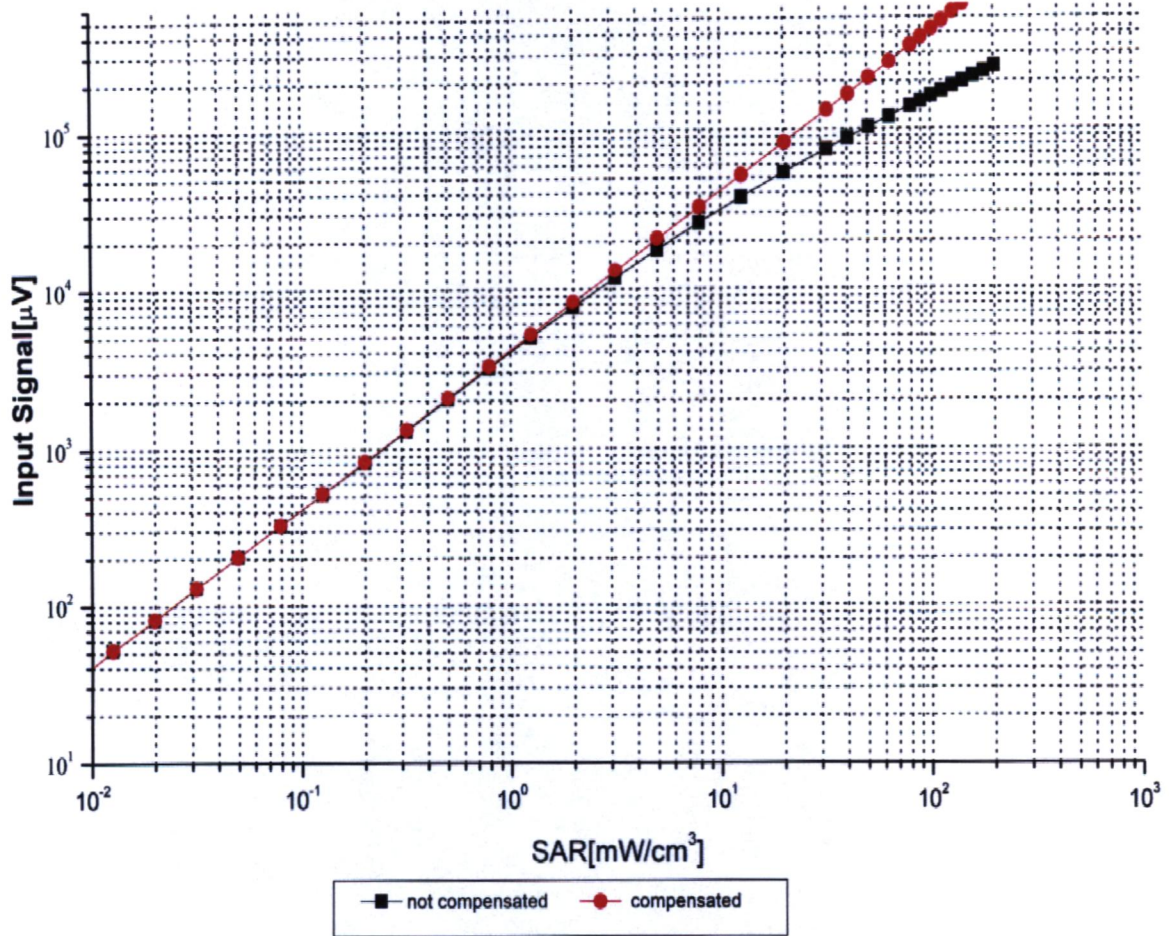


Uncertainty of Axial Isotropy Assessment:  $\pm 1.2\%$  ( $k=2$ )



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## Dynamic Range $f(\text{SAR}_{\text{head}})$ (TEM cell, $f = 900 \text{ MHz}$ )



**Uncertainty of Linearity Assessment:  $\pm 0.9\%$  ( $k=2$ )**

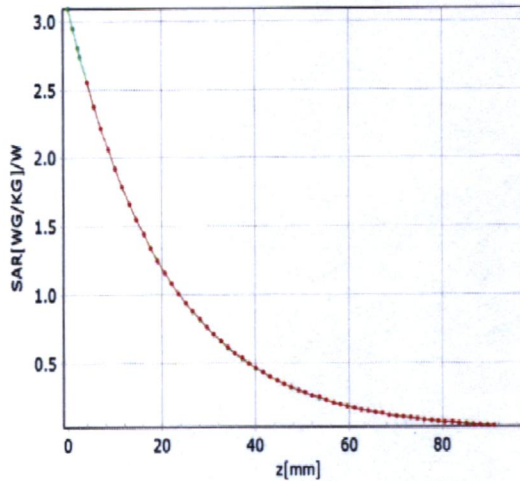


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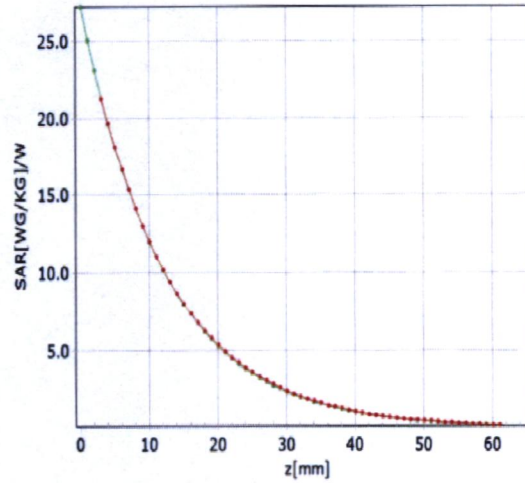
## Conversion Factor Assessment

f=750 MHz,WGLS R9(H\_convF)

f=1750 MHz,WGLS R22(H\_convF)

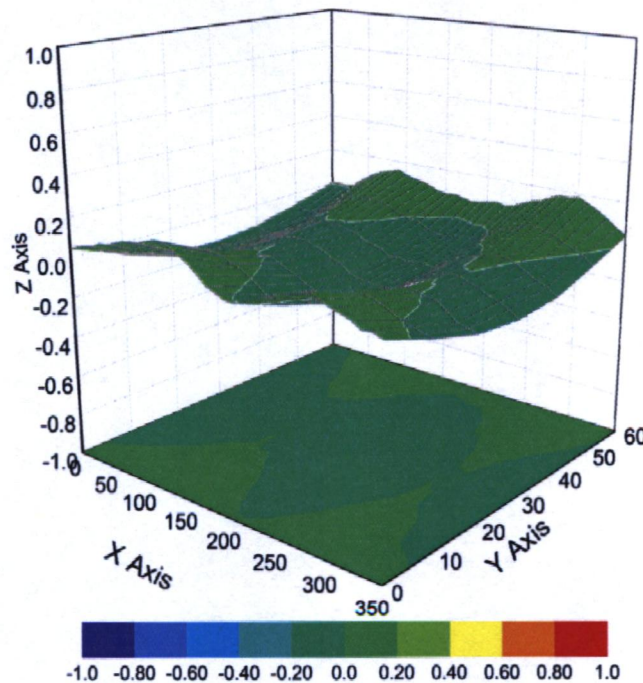


\* analytical   \* measured



\* analytical   \* measured

## Deviation from Isotropy in Liquid



Uncertainty of Spherical Isotropy Assessment:  $\pm 3.2\%$  ( $k=2$ )



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## DASY/EASY – Parameters of Probe: EX3DV4 – SN:7524

### Other Probe Parameters

<b>Sensor Arrangement</b>	<b>Triangular</b>
<b>Connector Angle (°)</b>	<b>93.8</b>
<b>Mechanical Surface Detection Mode</b>	<b>enabled</b>
<b>Optical Surface Detection Mode</b>	<b>disable</b>
<b>Probe Overall Length</b>	<b>337mm</b>
<b>Probe Body Diameter</b>	<b>10mm</b>
<b>Tip Length</b>	<b>9mm</b>
<b>Tip Diameter</b>	<b>2.5mm</b>
<b>Probe Tip to Sensor X Calibration Point</b>	<b>1mm</b>
<b>Probe Tip to Sensor Y Calibration Point</b>	<b>1mm</b>
<b>Probe Tip to Sensor Z Calibration Point</b>	<b>1mm</b>
<b>Recommended Measurement Distance from Surface</b>	<b>1.4mm</b>